

Florian Holzbauer

Personal Data

Address: Freistädter Str. 400, 4040 Linz, Austria
Email: florian.holzbauer@it-u.at
Homepage: <https://holzsec.at>
Research Interests: Internet Measurements, IPv6 Reconnaissance, Network and E-Mail Security

Professional Experience

Postdoctoral Researcher since 2/2026
Interdisciplinary Transformation University (IT:U), Linz, Austria

PhD Student 9/2022-2/2026
University of Vienna, Austria

Intern, Junior, Researcher 9/2017, 9/2018, 9/2020-2/2026
SBA Research, Vienna, Austria

Intern IT department 5/2015, 7/2014, 7/2013
Wittmann Battenfeld GmbH, Austria

Education

PhD in Computer Science 2/2026
With distinction, University of Vienna, Austria
Thesis: *Turning Failure Into Knowledge: Extending the Observable Internet by Leveraging Delivery Failures*
Supervisor: Dr. Johanna Ullrich, Dr. Edgar Weippl

Master in Information Security 7/2020
With distinction, UAS St.Pölten, Austria
Thesis: *IPv6-Reconnaissance - Internet-weite Analyse von ICMPv6*
Supervisor: Dipl. Ing. Peter Kieseberg, Dr. Johanna Ullrich

Bachelor in IT-Security 9/2018
With distinction, UAS St.Pölten, Austria
Thesis: *Scanning IPv6 using custom version of ZMAP*
Supervisor: Dr. Edgar Weippl, Dr. Johanna Ullrich

Publications

Holzbauer, F., Strobl, S., & Ullrich, J. (2025, October). Tracking Internet Disruptions in Ukraine: Insights from Three Years of Active Full Block Scans. In Proceedings of the 2025 ACM on Internet Measurement Conference (IMC 2025) (to be released).

Gegenhuber, G. K., Günther, M., Maier, M., Judmayer, A., Holzbauer, F., Frenzel, P., & Ullrich, J. (2025, October). Careless Whisper: Exploiting Silent Delivery Receipts to Monitor Users on Mobile

Instant Messengers. In Proceedings of the 28th International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2025) (to be released).

Holzbauer, F., Maier, M., & Ullrich, J. (2024, November). Destination Reachable: What ICMPv6 Error Messages Reveal About Their Sources. In Proceedings of the 2024 ACM on Internet Measurement Conference (IMC 2024) (pp. 280-294).

Gegenhuber, G. K., Holzbauer, F., Frenzel, P. É., Weippl, E., & Dabrowski, A. (2024). Diffie-Hellman Picture Show: Key Exchange Stories from Commercial VoWiFi Deployments. In 33rd USENIX Security Symposium (USENIX Security 24) (pp. 451-468).

Gegenhuber, G. K., Maier, M., Holzbauer, F., Mayer, W., Merzdovnik, G., Weippl, E., & Ullrich, J. (2023). *An Extended View on Measuring Tor AS-level Adversaries*. Computers & Security, 103302.

Holzbauer, F., Ullrich, J., Lindorfer, M., & Fiebig, T. (2022). *Not that Simple: Email Delivery in the 21st Century*. In 2022 USENIX Annual Technical Conference (USENIX ATC 22) (pp. 295-308).

Projects Involved

Automated Testbeds for the Evaluation of Intrusion Detection Capabilities (testcat) 2024-2026
funded by KIRAS, Austrian Research Promotion Agency (FFG)
Role: Researcher

Semantic and Cryptographic Foundations of Security and Privacy by Compositional Design (SPyCoDe) 2023-2026
funded by Special Research Programmes (SFB), Austrian Science Fund (FWF)
Role: Researcher

SBA Research K1 (2nd Funding Period) 2021 - 2025
funded by COMET K1, Austrian Research Promotion Agency (FFG)
Role: Researcher of Area 1 *Networked System Security*

Adaptive AI/ML for Dynamic Cybersecurity Systems (DynAISEC) 2022 - 2023
funded by ICT of the Future, Austrian Research Promotion Agency (FFG)
Role: Researcher

Identification & Disintegration of Single Points of Failure on the Internet (2big2fail) 2020-2022
funded by BRIDGE 1, Austrian Research Promotion Agency (FFG)
Role: Researcher

Handling Data from IPv6 Scanning 2020
funded by European Commission's Next Generation Internet (NGI) Programme Zero Discovery
Role: Researcher

Research Visits

Visiting researcher, Distributed Systems & Security and Privacy Laboratory
University of Pennsylvania (Duration: Aug. 17 – Nov. 17, 2023; with Prof. Sebastian Angel)

Visiting researcher, Internet Analytics Group
IMDEA Networks Madrid (Duration: Feb. 14 – Mai. 20, 2024; with Prof. Narseo Vallina-Rodríguez)

Awards

Netidee Stipend (10.000€) for my doctoral thesis with the title: *Turning Failure Into Knowledge: Extending the Observable Internet by Leveraging Delivery Failures*

Measurement Platforms and Artifacts

municipalytics.internetwarte.eu: Map of the digital infrastructure of municipalities across GDPR countries.

email-security-scans.org: Adoption of email security standards on the sender side.

destination-reachable: IPv6 measurement methodology and router fingerprinting framework.

countrymonitor.github.io: Dataset and platform for detecting Internet outages.

internetwarte.eu/agentsetup: Agent environment survey and visualization dashboard.

Non-Academic Presentations

2025, Jun 25–26 IKT (Vienna, AT)
Von Österreich zur Ukraine und zurück: Aktive Messungen zum Erkennen von Internetausfällen

2025, Feb 25 Security Meetup
From Ping to Blackout: Active Measurements on Internet Disruptions in Ukraine (Kherson)

2025, Feb 24 ATNOG 25/1, Linz AG (Linz, AT)
Von Österreich zur Ukraine und zurück: Aktive Messungen zum Erkennen von Internetausfällen

2024, Sep 18 IKT (Vienna, AT)
Analyse Rerouting Internet in Kherson